

**PATENT COOPERATION TREATY**

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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GOODYEAR PATENT  
& TRADEMARK DEPT.

**PCT**

**NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 71.1)**

Date of mailing (day/month/year)	03.01.2002
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Applicant's or agent's file reference  
**DN1999195PCT**

**IMPORTANT NOTIFICATION**

International application No. <b>PCT/US99/21694</b>	International filing date (day/month/year) <b>20/09/1999</b>	Priority date (day/month/year) <b>20/09/1999</b>
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Applicant  
**THE GOODYEAR TIRE & RUBBER COMPANY et al.**

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

**4. REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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Name and mailing address of the IPEA/   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Houyez-Stevens, M  Tel. +49 89 2399-8163
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DN1999195PCT	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/21694	International filing date (day/month/year) 20/09/1999	Priority date (day/month/year) 20/09/1999
International Patent Classification (IPC) or national classification and IPC C08J5/12		
Applicant THE GOODYEAR TIRE & RUBBER COMPANY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I    Basis of the report
- II    Priority
- III    Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV    Lack of unity of invention
- V    Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI    Certain documents cited
- VII    Certain defects in the international application
- VIII    Certain observations on the international application

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Date of submission of the demand 21/03/2001	Date of completion of this report 03.01.2002
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer West, N Telephone No. +49 89 2399 7582



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/21694

## I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-15 as originally filed

### Claims, No.:

1-17 as received on 03/12/2001 with letter of 29/11/2001

### Drawings, sheets:

1/7,4/7-7/7 as originally filed

2/7,3/7 as received on 11/09/1999 with letter of 10/09/1999

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US99/21694

the description,      pages:  
 the claims,      Nos.:  
 the drawings,      sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims
	No:	Claims 1-2
Inventive step (IS)	Yes:	Claims
	No:	Claims 3-17
Industrial applicability (IA)	Yes:	Claims 1-17
	No:	Claims

2. Citations and explanations  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US99/21694

Reference is made to the following document (D):

**D1: EP 0 795 397 A (GOODYEAR TIRE & RUBBER) 17 September 1997 (1997-09-17) cited in the application**

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Document **D1** discloses a method of bonding at least two elastomeric layers, the method comprising placing an uncured elastomeric component between the two elastomeric layers and curing the elastomeric component to bond the layers together. Furthermore **D1** discloses that the uncured layer is formed by preparing the two elastomer compounds wherein each compound is prepared with a co-reacting agent of a cure package not added to the other compound and layering said compound in alternating layers (p. 3, lines 4-13; example 1; claims 1 and 11).

It is pointed out, that a definition of the subject-matter of claim 2 by a result to be achieved (120°C, less than 30 min), cannot limit the scope of the claim (see The PCT Guidelines C-III 4.7).

Therefore, the present application does not meet the requirements of Article 33(2) PCT, because the subject-matter of claims 1 and 2 is not new.

2. The person skilled in the art would regard the subject-matter of claims 3-17 as mere routine variations and therefore the subject-matter of claims 3-17 lacks inventive step (Article 33(3) PCT).

**CLAIMS**

1. A method of bonding at least two cured or uncured curable elastomeric layers, the method comprising placing an uncured elastomeric component (22) between the two elastomeric layers, and curing the elastomeric component (22) to bond the elastomeric layers together, wherein the method is characterized by forming the uncured elastomeric component (22) by
  - a) preparing two non-productive elastomer compounds (10, 12), wherein each non-productive compound (10, 12) is prepared with a co-reacting agent of a co-reacting cure package not added to the other non-productive compound (10, 12),
  - b) layering the non-productive elastomer compounds (10, 12) in alternating layers with a thickness relative to the diffusion rate of the co-reacting agents in each non-productive elastomeric layer to effect diffusion of the co-reacting cure agents through the adjacent layers.
2. A method of bonding in accordance with claim 1 wherein the elastomeric component (22) achieves ninety percent cure, at a cure temperature of 120° C, in less than 30 minutes.
3. A method of bonding in accordance with claim 1, the improvement being characterized by preparing the two non-productive compounds (10, 12) with identical compositions except for the co-reacting cure agents in each compound (10, 12).
4. A method of bonding in accordance with claim 1, the improvement being characterized by forming each adjacent layer with a thickness equal or less than 2 mm.
5. A method of bonding in accordance with claim 1, the improvement being characterized by layering the two non-productive elastomer compounds (10, 12) with differing thickness.
6. A method of bonding in accordance with claim 1, the improvement being characterized by the further step of storing the two non-productive compounds (10, 12) for a period of time prior to layering.

AMENDED SHEET

13. A method of bonding in accordance with claim 12, the method being characterized by forming the uncured elastomeric component (102) immediately prior to inserting the elastomeric component (102) between the tire carcass (106) and the tire tread (104).
14. A method of bonding in accordance with claim 12, the method being characterized by forming the uncured elastomeric component (102) at any time prior to inserting the elastomeric component (102) between the tire carcass (106) and the tire tread (104).
15. A method of bonding in accordance with claim 12, the method being characterized by the further step of preheating the tire tread (104) prior to placing the tread (104) on the uncured elastomeric component (102).
16. A method of bonding in accordance with claim 15, the method being characterized by curing the elastomeric component (102) at room temperature.
17. A method of bonding in accordance with claim 1, the method being characterized by the co-reacting agents of the cure package being selected to produce an ultra fast cure.



Creation date: 11-01-2003

Indexing Officer: HLE11 - LE HUNG

Team: OIPEBackFileIndexing

Dossier: 10031500

Legal Date: 04-01-2002

No.	Doccode	Number of pages
1	M903	2

Total number of pages: 2

Remarks:

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